

# Development of Learning Media Based on Multimedia Flash in Courses Planning and Teaching Learning Strategies at Muhammadiyah University Bengkulu

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## ABSTRACT

The development of Flash multimedia-based Learning Media in Instructing and Learning Planning and Strategy Courses at the University of Muhammadiyah Bengkulu is based on the rapid development of technology that requires students to study at home due to the covid 19 pandemic. One of the devices that are dominated by its use is a laptop/PC that can be used for distance learning (online). In addition, the lack of student motivation to bring and read books, there is no learning available by developing flash multimedia as a learning medium for Teaching and Learning Strategies courses. The purpose of this research is to develop Flash multimedia-based Learning Media in Planning and Teaching and Learning Strategies Courses at the University of Muhammadiyah Bengkulu. As well as knowing the feasibility of Flash multimedia-based Learning Media in the Teaching and Learning Planning and Strategy Course to be applied to students in the fourth semester of the Economic Instruction Ponder Program. This sort of Investigate is Inquire about and advancement (R&D). The improvement shown utilized is ADDIE, consisting of five (5) steps of analysis, design, development, implementation, evaluation. The comes about of the consider were validated by material experts who were declared "Eligible" to be used, which obtained the results of data analysis by obtaining an average percentage of 81.66% with a standard percentage level of 76%-85%. Media specialists have gotten a normal rate of 83.33% with a standard percentage rate of 76%-85% considered "Decent." Learning specialists get a normal rate of 80.20% with a standard percentage level of 86%-100%, meaning that this development product is considered very feasible to be used in the field. Furthermore, based on field trials to students, the average percentage is 86%, with a standard level of practicality of 86%-100%, meaning that the use of learning media is said to be very practical to use in the teaching and learning process for Teaching and Learning Strategies courses.

**Keywords:** *Multimedia Flash, Learning Media, Teaching and Learning Strategies*

## 1. INTRODUCTION

Education has a significant effect on the quality of life of a country, so the optimization of the quality of human resources must be continuously promoted through the education process. Science and technology will grow along with the rapid development of civilization and culture. The development of culture will be largely determined by the behavior and thinking paradigm of the community, while the growth and progress of the community's thinking paradigm are influenced by the education system. If a country hopes for scientific and technological progress, the government must continue to optimize the quality of education as much as possible.

The development of the world of education is currently significantly affected by the global crisis caused by Covid-19. The Covid-19 pandemic has a significant impact on various lines of life, including disruption of learning activities [1]. The outbreak of the Covid-19 virus in Indonesia has made the government decide to shift learning activities to be done at home and

apply to all levels of education, including universities. Learning activities that are usually carried out in person are then carried out online. The condition causes many educators to feel surprised by the transition of the learning process. Students are asked to study from home, and the process of delivering learning materials is carried out through various media [2].

The online learning system that was started during the pandemic for educational institutions has become a transitional phase that must be followed by lecturers and students. Distance learning is aimed at optimizing the quality of education, maintaining the relevance of education, and maximizing equal access and distribution of education. This distance learning system is carried out by ensuring that the quality of education is good and relevant to the needs of stakeholders, becoming a mechanism to expand access to higher education [3].

The University of Muhammadiyah Bengkulu is no exception, which since mid-March 2020 has started implementing online learning activities. This condition

has led to a very drastic transition in teaching and learning methods, where students and lecturers are only allowed to conduct lecture activities virtually. Lecturers and students are also required to work together to develop their abilities and creativity virtually in order to create a conducive and effective learning atmosphere. But in reality, many obstacles and weaknesses are found in this online learning method, such as anxiety and stress in students, which ultimately has an impact on the decline in student achievement.

Several facts about the impact of online learning on student achievement have been carried out. In his study, it was proven that online learning is able to support students to study independently and trigger learning motivation [4]. But the problem is that lecturers cannot control or supervise students properly, so the effectiveness of learning decreases. Online learning amid the COVID-19 widespread also has a negative effect on

the mentality of students, especially the emergence of anxiety or worries, which of course, affect learning outcomes [5]. Education that should be carried out optimally due to this pandemic crisis has become hampered and has an impact on the decline in student enthusiasm and inspiration to memorize [6].

Based on the comes about of an initial investigation conducted at the University of Muhammadiyah Bengkulu, particularly the Economics Education Study Program, the researchers found the fact that there was a decline in student learning outcomes during the online learning period. The data collected by the researcher shows that the UTS and UAS scores for Semester III students for the Teaching and Learning Planning and Strategy courses still get scores below the Minimum Learning Completeness (KBM). The facts of the decline in student learning outcomes during online learning are presented in the taking after the table.

**Table 1.** Recapitulation of UTS Scores for Semester III Students in the Teaching and Learning Planning and Strategy Course at the University of Muhammadiyah Bengkulu

No	Class	Total Students	Successful Students	Successful Not Students	Percentage (%)	
					Successful Student	Student Unsuccessful
1.	<b>Semester III A</b>	30	12	18	40 %	60%
2.	<b>Semester III B</b>	30	16	14	53,33 %	46,66%

*Source: University of Muhammadiyah Bengkulu Economic Education Study Program, 2020*

**Table 2.** Recapitulation of UAS Scores for Semester III Students in the Teaching and Learning Planning and Strategy Course at the University of Muhammadiyah Bengkulu

No.	Class	Total Students	Successful Students	Successful Not Students	Percentage (%)	
					Successful Student	Student Unsuccessful
1.	<b>Semester III A</b>	30	11	19	36,66 %	63,33 %
2.	<b>Semester III B</b>	30	14	16	46,66 %	53,33 %

*Source: University of Muhammadiyah Bengkulu Economic Education Study Program, 2020*

Based on the table above and based on the comes about of interviews with Lecturers of Teaching and Learning Planning and Strategy (PSBM) courses at the Economic Education Study Program, University of Muhammadiyah Bengkulu, supported by facts on the ground, it shows that the level of understanding and student learning outcomes is categorized as low. In fact, the expected result for students' ability to understand this subject is 80% mastery, which will later be applied when implementing the Field Experience Practice Program (PPL). Based on the observations, the researchers found several causes for the decline in learning outcomes. First, the effect of quarantine which requires students to study only at home, has a significant effect on learning motivation. Students lose their motivation to learn because of the cessation of learning, and when at home,

most students do not fill their time with effective learning activities. The factor of the length of time off lectures is also another cause of the decline in student learning motivation.

This phenomenon is supported by the statement that new habit patterns that are initially felt to be fun but once carried out in the long term will certainly cause boredom and boredom [7]. With the current pandemic situation, of course, student learning motivation will recede, even many students finally lose their enthusiasm to carry out organizational activities because all dominant activities are carried out virtually, which of course the atmosphere felt by students is much different from before. Another fact also proves that apart from psychological factors, another factor that also has an impact on the

effectiveness of student learning outcomes is the use of media in online learning activities. Creativity is the use of learning media that will support and maximize the effectiveness and efficiency of learning to achieve learning objectives [8].

Online learning methods are expected to improve students' abilities, knowledge, and potential as well as learning methods in the classroom. To support this goal, learning media are needed that are dynamic in nature, able to describe all lecture material comprehensively, and implement the results in the real world. The online learning system will run effectively if it fulfills the essential elements in learning, namely discursive, adaptive, interactive, and reflective [9]. Important elements in learning will be very good if they are aligned with the conditions of students. An online learning system that collaborates with the environment or in accordance with the elements in the "digital learning ecosystem" will certainly be able to accommodate learning patterns, flexibility, and student learning experiences, thereby creating positive feelings.

One of the indicators that affect the effectiveness of learning is the utilize of learning media that's relevant to the situation and conditions, both in terms of content, material, and the student's environmental situation. The transformation of the lecture material "Planning and Teaching and Learning Strategy" will run optimally if the material requires students to participate directly in it. In addition, today's students are required to be able to promptly adjust to changes within the learning system that was originally verbal or memorizing to be applied skills.

To adapt to government policies that require students to study at home, it requires education practitioners to try to choose the right learning media with the Covid-19 pandemic crisis situation. The use of appropriate learning media will help students to understand the learning material, even though learning activities are carried out at home. The selection of learning media can be adjusted to the characteristics, needs, and abilities of each student [10]. The benefits of learning media are to minimize verbalism in the delivery of information, to overcome the limited learning space, to make time-efficient, and to optimize the senses. The use of appropriate and varied learning media can increase student activity, stimulate learning motivation, provide equality of experience and the same perception for students [11].

One form of learning media that utilizes technological sophistication is interactive multimedia. Interactive multimedia is an intermediary instrument that is useful for transforming information through the collaboration of various elements that support the creation of an active and effective learning process. Multimedia devices can support an active learning process for students and will have an effect on students' thinking power. Conceptually, multimedia presents two elements, namely in text format (oral or written) and images, illustrations, animations, photos, or videos [12].

One of the software that strongly supports interactive learning media applications is Flash. The Flash program contains all the elements in multimedia that are useful for optimizing the learning process and ultimately improving student achievement. Flash is a program for creating web designs, games, animations, presentations, applications, CDs, and interactive learning media. This program is able to process text and objects with three-dimensional effects so as to create more interesting results [13]. Flash is also an application that has many enthusiasts because this program is able to do various things related to multimedia.

The Flash program presents learning materials that contain images, text, music, video, and audio that can sharpen the delivery of learning information. Learning media that is supported by visuals and audio-visuals can help students to overcome boredom and will be more motivated to attend lectures than just undergoing conventional learning models [14]. Flash also stimulates students to be active in learning, where students will be asked to interact directly in operating this program.

Several studies on the development of Flash-based multimedia have been carried out, which have succeeded in proving that the development of educational games with Flash within the Working Framework Course for Understudies of the Bung Hatta University Computer and Informatics Engineering Education Study Program is optimal because it has achieved very good criteria with an average score of 91, 38% [15]. The development research conducted proves that the basic biology teaching materials based on Adobe Flash Cs6 are very feasible to be applied at the Muhammadiyah University of Sidenreng Rapping. The comes about of the evaluation of fabric specialists, and media specialists on Flash Cs6-based teaching materials gave very valid results with an average validity value of 5 and 4.95 [16].

## ***1.1 Identification of Problems and Research Questions***

### ***1.1.1 Identification of Problems***

From the explanation of the background of the problem, there are cases including:

- a. Lectures with Teaching and Learning Planning and Strategy materials that take place virtually are currently running conventionally, only using materials and not using other learning media devices.
- b. The use of the Flash Program as a learning medium to support online learning models is still rarely applied by lecturers.
- c. In the Covid-19 pandemic situation where many students are bored and bored due to the ineffectiveness of the learning process, it requires lecturers to develop their creativity so as to create interesting and interactive learning media.
- d. The theoretical explanation for the Teaching and Learning Planning and Strategy course requires a set of supporting media in the form of Flash multimedia.

**1.1.2 Research question**

Based on the description of the background above, the formulated problems are:

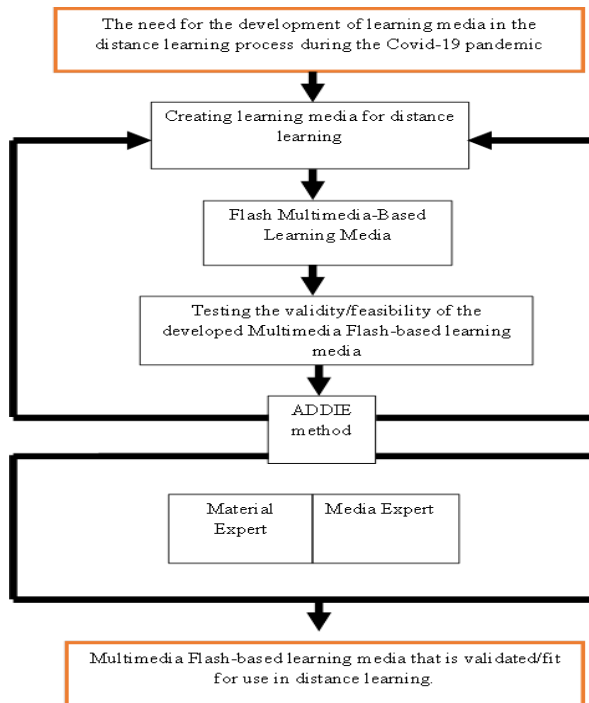
- a. How is the validity of Flash multimedia-based learning media for the Teaching and Learning Planning and Strategy course?
- b. How is the practicality of Flash multimedia-based learning media for the Teaching and Learning Planning and Strategy course?
- c. How is the effectiveness of Flash multimedia-based learning media for the Teaching and Learning Planning and Strategy course?

**1.2 Research Objectives**

This research was carried out to obtain the expected goals, including:

- a. To discover out the legitimacy of Flash multimedia-based learning media for the Teaching and Learning Planning and Strategy course.
- b. To discover out the common sense of Flash multimedia-based learning media for the Teaching and Learning Planning and Strategy course.
- c. To discover out the adequacy of Flash multimedia-based learning media for the Teaching and Learning Planning and Strategy course.

**1.3 Framework of thinking**



**Figure 1 Thinking Framework**

**2. METHOD**

**2.1 Types of Research**

This type of research uses a research and development model.

**2.2 Place and Time of Research**

The research was carried out in June 2021 for fourth-semester students of the Economics Education Study Program, Faculty of Teacher Training and Education, the University of Muhammadiyah Bengkulu, who are currently taking Teaching and Learning Planning and Strategy (PSBM) courses.

**2.3 Data Collection Technique**

The information collection strategy utilized in this investigation is to utilize a survey.

**2.4 Research Instruments**

Instruments In development research, the instruments or research tools are fourth-semester understudies of the Financial matters Instruction Think about Program, Staff of Educator Preparing and Instruction, College of Muhammadiyah Bengkulu

**2.5 Data Validity**

To check the validity of the data in this study, the researcher used the Likert Technique.

**3. RESULT AND DISCUSSION**

**3.1 Discussion of the Design Results of Flash multimedia-based Learning Media Development in Teaching and Learning Strategy Courses**

The improvement of streak multimedia-based learning media is based on a needs analysis that is not yet available flash multimedia-based learning media and on the basis of analysis of teaching media for teaching and learning strategies courses used in teaching and learning strategies in Semester IV Economic Instruction Consider Program, Workforce of Educator Preparing and Instruction, College Muhammadiyah Bengkulu. Flash multimedia-based learning media was created utilizing the ADDIE improvement plan show through an arrangement of precise improvement stages, specifically organize (investigation), organize (plan), arrange (improvement), arrange (usage), and organize (assessment).

To find out that the flash multimedia-based learning media is valid and practical, trials are carried out, in this case, our expert reviews. Validation carried out by experts focuses on two main characteristics, namely the material/content of teaching and learning strategies courses, product media design. This validation is carried out to assess the product design that has been developed after learning media based on multimedia Flash. Validated, then analyzed quantitative data, namely the

number of questionnaire scores and qualitative data, namely comments and suggestions from experts. From the results of the validation by material experts, they get a score of 81.66%, which means it is valid, media experts get a score of 83.33%, which means it is valid, and from learning expert lecturers, it gets 80.20% which means it is valid.

In the process of developing this flash multimedia-based learning media, researchers conducted trials on students as learners, which were intended to determine student responses to the products developed. Researchers conducted field trials on 20 students in the experimental group, namely fourth-semester students of the Financial Instructions Consider Program, Workforce of Educator Preparing and Instruction, College of Muhammadiyah Bengkulu.

The prototype that has been field-tested gets a validation result percentage of 86% so that if it is converted, it is at the valid qualification level. This Flash multimedia-based learning media can be watched by all students in the class with the help of an LCD or laptop.

### ***3.2 Discussion of Contrasts in Classroom Learning Results Utilizing and Not Utilizing Streak multimedia-based Learning Media within the Educating and Learning Methodology Course for Semester IV Understudies of the Financial Instructions Ponder Program, Workforce of Instructor Preparing and Instruction, College of Muhammadiyah Bengkulu.***

After the researcher taught the two classes, the researcher conducted a post-test activity to determine the level of progress that had been achieved by the students. As stated by Suharsimi Arikunto that one of the errors that come from the evaluator is the presence of a certain impression from the evaluator of the student he is assessing, both from his personal experience about the student and information from other people about the student concerned.

Learning using flash multimedia-based learning media that was developed includes a positive impact on the esteem of understudy learning results. The achievement of the effectiveness of flash multimedia-based learning media is indicated by an increase in student learning results within the test course, which is superior to the learning results within the control course.

Furthermore, product testing activities were carried out on fourth-semester students of the Economic Education Study Program. In this study, the researcher used two groups, then one of the bunches served as the control bunch, and the other served as the test gather.

In the experimental group, the minimum sample size accepted is 20 subjects per group, so in this development research, researchers only took the size of the fourth-semester understudies of the Financial Instructions

Consider Program, College of Muhammadiyah Bengkulu. The minimum sample was 20 respondents within the control group and 20 respondents within the test bunch. Within the control gather, learning was carried out without streak multimedia-based learning media. Within the test bunch, learning is carried out utilizing streak multimedia-based learning media. The results of the pre-test semesters IV A and IV B, which were carried out simultaneously, showed that the average was below the KKM, namely 74 in the control class and 71 in the experimental class. From the results of this pre-test, researchers can analyze the weaknesses of students' knowledge in understanding the use of learning resource media in the teaching and learning process. Typically in understanding with what Dimiyati and Mujiono clarified, specifically that learning results are eventually worked and pointed at diagnosing the shortcomings and qualities of understudies and their causes. Based on this conclusion, the speaker conducts the improvement of learning exercises to move forward understudy learning results.

The potential of technology as a medium in teaching and learning strategies can be utilized to overcome individual student differences, teach concepts, and stimulate student learning.

For students who are slow learners, technology can help by repeating the material several times until they master the material. For students who are classified as fast learners, they can be given enrichment so that they are more challenged to explore the material in question so that students gain a better understanding of the concept.

The presence of solidness, increment, and diminish in learning results can be appeared to be caused by a few variables. This demonstrates that a fruitful learning preparation requires back and relates a few viewpoints.

There are two components that can influence learning results, to be specific inner components, otherworldly or mental components, and outside variables. Inner variables are components from inside understudies such as physical (physiological viewpoints) and otherworldly (mental perspectives) understudies. Outside components are components from exterior understudies, such as natural conditions/conditions around students.<sup>12</sup> Based on perceptions, the foremost persuasive figure on understudy learning results is inner variables, specifically from the mental viewpoint of understudies.

One angle of understudy brain research is understudy learning styles Learning style. Learning style is the way we prefer to think, process, and understand information. Research results show that students who study using the dominant learning style when taking tests will achieve much higher scores than if they study in a way that is not in line with their learning style.

There are different learning styles, counting sound-related learning styles, visual learning styles, kinesthetic learning styles, worldwide learning styles, and

explanatory learning styles. Within the preparation of this inquire, the learning handle was outlined utilizing flash multimedia-based learning media to support auditory learning styles and visual learning styles [17].

#### 4. CONCLUSION

The conclusions in this study include, the material expert is declared "Eligible" to be used, who obtains the results of data analysis by obtaining an average percentage of 81.66% with a standard percentage level of 76%-85%, meaning that this development product is considered suitable for use in the field. Media experts obtained an average percentage of 83.33% with a standard percentage level of 76%-85%, meaning that this development product is considered suitable for use in the field. Learning experts get an average percentage of 80.22% with a standard percentage level of 86%-100%, meaning that this development product is considered very feasible to be used in the field. The use of this learning media is stated to be very practical to use in economic learning.

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